

**CLAIMS:**

1. A commercial package comprising;

means for determining the concentration of heme  
oxygenase-1 (HO-1) and/or a nucleotide sequence encoding HO-1,  
in bodily fluid or non-neural tissue obtained from a patient;  
and

instructions for assessing a dementing disease in the  
patient;

wherein said commercial package is used to predict the onset  
of, diagnose, or prognosticate a dementing disease.

2. A commercial package comprising;

means for determining the concentration of heme  
oxygenase-1 (HO-1) and/or a nucleotide sequence encoding HO-1,  
in bodily fluid or non-neural tissue obtained from a patient;  
and

instructions for comparing said concentration with the  
corresponding concentration of HO-1 and/or an HO-1 encoding  
nucleotide sequence in corresponding bodily fluid or non-neural  
tissue obtained from at least one control person;

wherein a reduced concentration is used to predict the onset  
of, diagnose, or prognosticate an Alzheimer dementing disease;  
and wherein a concentration that is not reduced indicates that  
the dementing disease is not an Alzheimer dementing disease.

3. The commercial package according to claim 1 wherein  
the means is for determining the concentration of HO-1 and the  
bodily fluid is selected from plasma and cerebrospinal fluid  
and the tissue is selected from lymphocytes and fibroblasts, or  
the means is for determining the concentration of HO-1 encoding  
nucleotide sequence and the tissue is selected from lymphocytes  
and fibroblasts.

4. The commercial package according to claim 2 wherein the means is for determining the concentration of HO-1 and the bodily fluid is selected from plasma and cerebrospinal fluid and the tissue is selected from lymphocytes and fibroblasts, or the means is for determining the concentration of HO-1 encoding nucleotide sequence and the tissue is selected from lymphocytes and fibroblasts.

10 5. A commercial package according to claim 3 wherein the bodily fluid is plasma.

6. A commercial package according to claim 4 wherein the bodily fluid is plasma.

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7. The commercial package according to claim 3 wherein the means is for determining the concentration of HO-1 and the tissue is lymphocytes.

20 8. The commercial package according to claim 4 wherein the means is for determining the concentration of HO-1 and the tissue is lymphocytes.

9. The commercial package according to claim 3 wherein  
25 the means is for determining the concentration of HO-1 mRNA and the tissue is lymphocytes.

10. The commercial package according to claim 4 wherein  
the means is for determining the concentration of HO-1 mRNA and  
30 the tissue is lymphocytes.

11. The commercial package according to claim 1 wherein the dementing disease is selected from the group consisting

of Alzheimer's Disease, Age-Associated Cognitive Decline, Progressive Supranuclear Palsy, Vascular (i.e. multi-infarct) Dementia, Lewy Body Dementia, Huntington's Disease, Down's syndrome, normal pressure hydrocephalus, corticobasal ganglionic degeneration, multisystem atrophy, head trauma, Creutzfeld-Jacob disease, viral encephalitis and hypothyroidism.

12. The commercial package according to claim 2 wherein the dementing disease is selected from the group consisting of Alzheimer's Disease, Age-Associated Cognitive Decline, Progressive Supranuclear Palsy, Vascular (i.e. multi-infarct) Dementia, Lewy Body Dementia, Huntington's Disease, Down's syndrome, normal pressure hydrocephalus, corticobasal ganglionic degeneration, multisystem atrophy, head trauma, Creutzfeld-Jacob disease, viral encephalitis and hypothyroidism.

13. The commercial package according to claim 2 wherein the at least one control person is a normal age-matched person.

14. The commercial package according to claim 2 wherein the at least one control person is the patient from whom the corresponding concentration of HO-1 and/or an HO-1 encoding nucleotide sequence in bodily fluid and non-neural tissue was obtained at an earlier date, and the commercial package is used to prognosticate a dementing disease.

15. A commercial package comprising means for determining the concentration of heme oxygenase-1 (HO-1) and/or a nucleotide sequence encoding HO-1, in bodily fluid or tissue obtained from a patient, and instructions for comparing said concentration with an established standard of the corresponding concentration of HO-1 and/or an HO-1 encoding nucleotide

sequence in corresponding bodily fluid or tissue obtained from at least one normal age-matched control person or from the patient at an earlier time.

5 16. The commercial package according to claim 15 wherein the means is for determining the concentration of HO-1 and the bodily fluid is selected from plasma and cerebrospinal fluid and the tissue is selected from lymphocytes and fibroblasts, or  
10 the means is for determining the concentration of HO-1 encoding nucleotide sequence and the tissue is selected from lymphocytes and fibroblasts.

17. A commercial package according to claim 16 wherein the bodily fluid is plasma.

15 18. The commercial package according to claim 16 wherein the means is for determining the concentration of HO-1 or HO-1 mRNA and the tissue is lymphocytes.

20 19. The commercial package of claim 15 wherein the corresponding bodily fluid or tissue is obtained from at least one normal age-matched control person.

25 20. The commercial package of claim 15 wherein the corresponding bodily fluid or tissue is obtained from the patient at an earlier time.